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Comments on DOE/RL-2004-48, Rev.1, Proposed Plan for an Amendment to the K Basins Interim Remedial Action Record of Decision

Richard I Smith, P.E. 1/28/05

Let me say up front that I support the general philosophy of the proposed changes, Alternative 2 (Sludge) and Alternative 2 (Debris). That said, I wish to address the quality and usefulness of the existing Proposed Plan as a decision document and of its supporting FFS Addendum.

Information is nor provided either on which treatments will be applied to which sludge streams, or on where those treatments will be applied. What the document says, essentially, is: 'We will treat the sludge with some or all of the available treatments, at some undetermined locations, until the waste form is acceptable for disposal in either WIPP or LLW burial. Trust me.' That's not much of a plan upon which to seek comments and approval.

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The problem is exacerbated by the fact that neither the original Focused Feasibility Study, nor its addendum dealing with the two new alternatives, is available for viewing via the electronic document bases. The author of a document that requires essential references to support the assertions in the document must make sure that those reference reports are readily available to readers. As it is, the reader has no way to read about the evaluations of the various treatment processes proposed for use, nor to determine whether all rational treatment possibilities were considered and evaluated, nor where on the Site the treatment systems might be located. Even after I was able to obtain a hard copy of the Addendum, the topics of how and where were not addressed. Because I could not readily obtain a copy of the original FFS, I don't know how well, or if, those topics were addressed originally. For example, knowing all of the potential problems associated with having uranium metal fines in the sludge, it would seem that calcination of the sludge would be an excellent choice, with the calcined material feeding into the stabilizing process. It might be useful to consider a modified version of Bulk Vit to deal with that remote-handled material, making glass in drums or some other package form that was suitable for WIPP acceptance. With only the PP and FFS Addendum available to view, I have no idea if such an approach was even considered.

Similarly, there are no developments of the cost estimates given in either the Proposed Plan or in the Addendum to the FFS. Only top level values are given, with no bases for their values, and no references identified for that information. Perhaps this information was developed in the original FFS, but that information was not readily available. Because there is no definition provided of which and how many treatment processes will be applied to each sludge stream, it would seem impossible to develop a rational estimate of system costs (design, procurement, operations, decontamination/decommissioning) for the various systems postulated to be used. Considering the recent massive escalation of the cost estimates for the Bulk Vitrification Test Program, one has to wonder about the validity of the cost information provided.

Not being able to read the original FFS, I could not ascertain whether or not a reasonable variety of techniques were considered for use in decontaminating the basin walls as the water level is lowered. The hydrolaser method is certainly effective, but might be quite slow compared with an underwater mechanical scabbler device in terms of area cleaned per unit time. Perhaps all of these types of questions have been answered, or are intended to be answered through the final record of decision and the subsequent action plan. However, it is not clear to me that any useful public input is accepted at that stage of the game.

It would be helpful to the reader to see a simple table illustrating the relative performances of the various alternatives under each of the nine CERCLA criteria. Rank each alternative under each criterion as 1 (worst), 2 (about equal), and 3 (best), and sum across the criteria to get a simple performance measure. This approach is not very precise, but it is very helpful to better quantify all of the verbiage presented in the text under the CERCLA criteria regarding the cumulative performance of each alternative. Without such types of comparisons of alternatives, it is very difficult to ascertain the true bases for selection of a preferred alternative. Similarly, a table that contains values for the estimated cumulative occupational exposure and for cost for each alternative considered would further support (or make questionable) the chosen preferred alternative.